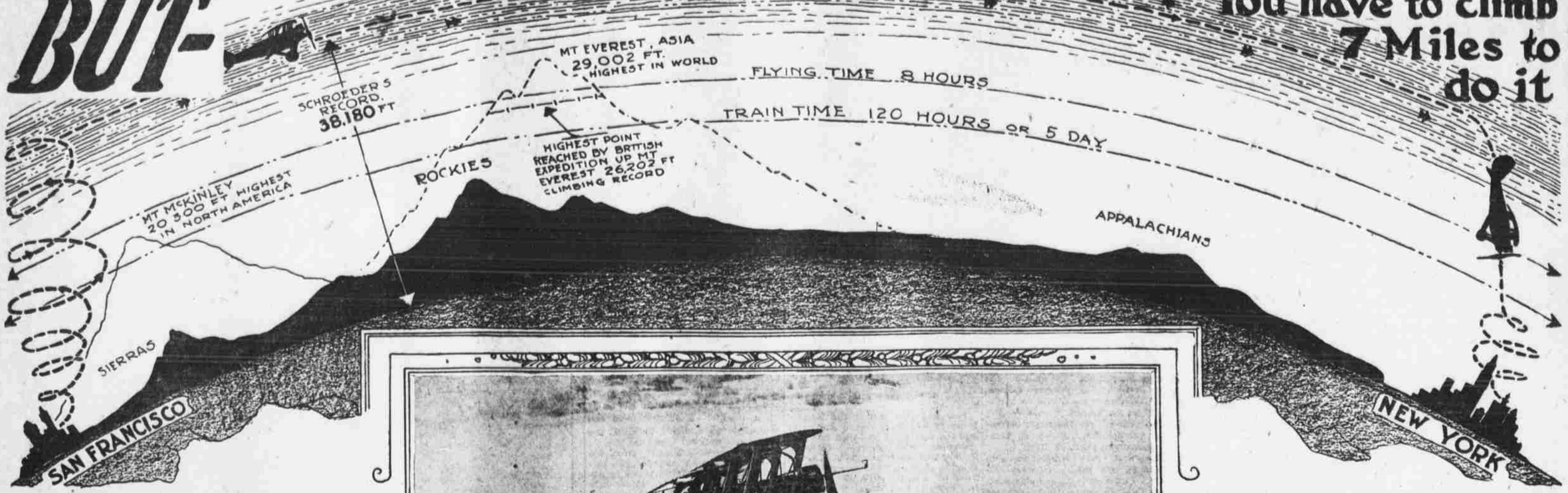
Around the World by Airplane in 3 days!

BUT—

You have to climb 7 Miles to do it



Swift Air Current Rushing From West to East 30,000 Feet Above Earth's Surface Would Sweep Airplane Along With It.

HOW would you like to hop off in an airplane from San Francisco just after your coffee and toast some morning and eat dinner on a roof garden in New York that evening? Sounds like an aerial fantasy, the dream of a speed maniac, but it can be done. Pioneers of the air tell you so. One of them is Major R. W. Schroeder, who once climbed to the dim and dizzy height of 38,180 feet, seven and one-fourth miles, in an airplane—the highest mortal man had ever ascended at that time—and then, unconscious and with his eyeballs frozen, shot downward like a meteor for seven miles before he regained consciousness, righted his machine and landed safely.

But how can this record-breaking transcontinental hop be accomplished? *Easy—just go up high enough.* And, if your plane could keep going continuously, you could then even make an aerial tour around the world in something like sixty-seven hours—a little less than three days.

Far above the earth, seven or eight miles or so, is a wind travelling at a velocity so great that the instruments of science have never been able to accurately gauge it. It is called the anti-trade wind and it circles the globe ceaselessly. A plane headed eastward which drifted into it would be carried along at such a tremendous speed that a coast-to-coast jump would be a simple day's task.

There is another freak which this wind would perform. It has such great speed that if a plane were to take off at New York, rise into its channel, fly for several hours in a westerly direction, it would descend not somewhere in the Mississippi Valley, but somewhere in the middle of the Atlantic Ocean! The wind's velocity would be so great that a ship, even though it were travelling normally at a rate of one hundred or so miles an hour, would be carried backward at an even greater speed.

This little insight into the mysteries of the air is but one of the puzzling and dangerous factors that confront man in his efforts to conquer the elements. There are many others, all just as interesting, explained recently to a writer on the Kansas City Sunday Star by Major Schroeder. Draw up your chair alongside the desk in the Underwriters' Laboratories Building, just outside of Chicago's loop, where sits Major Schroeder, and he will tell you of them.

He told of the strange mysteries and fantastic tricks of the air, of hairbreadth escapes, of thrills that come not once but many times in the life of an intrepid explorer of the upper regions, of the terrific wind which whirls about our sphere, how men will yet travel faster than they have ever travelled before, of the glowing future of the craft of the air, and of the record smashing flight and fall which left him living only through a miracle.

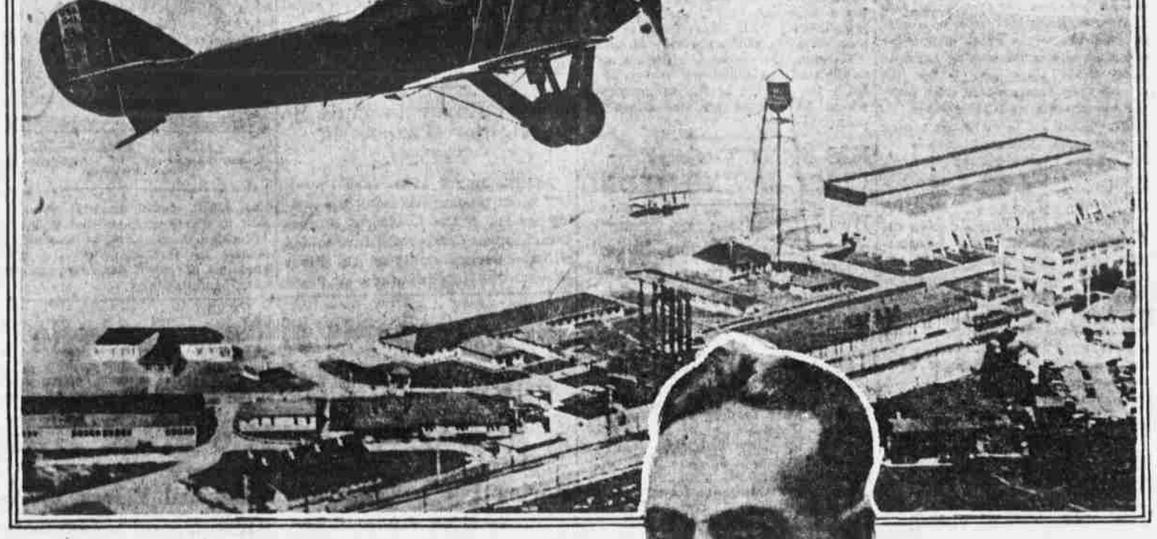
If you have a hankering to spend a day off some time skipping through the atmosphere from San Francisco to New York or from New York to Paris, Major Schroeder will tell you how it can be done—and why.

"Simplified," he says, as he leans back in the swivel chair, "simplified, it is this: an ocean of air surrounds the earth. Some say it is one hundred miles deep; others more. We know that the earth rotates from west to east and that its rim speed at the equator is 1,047 miles an hour around the axis. This great ocean of air rotates with the earth. There is some lag, of course, but its speed is approximately the same.

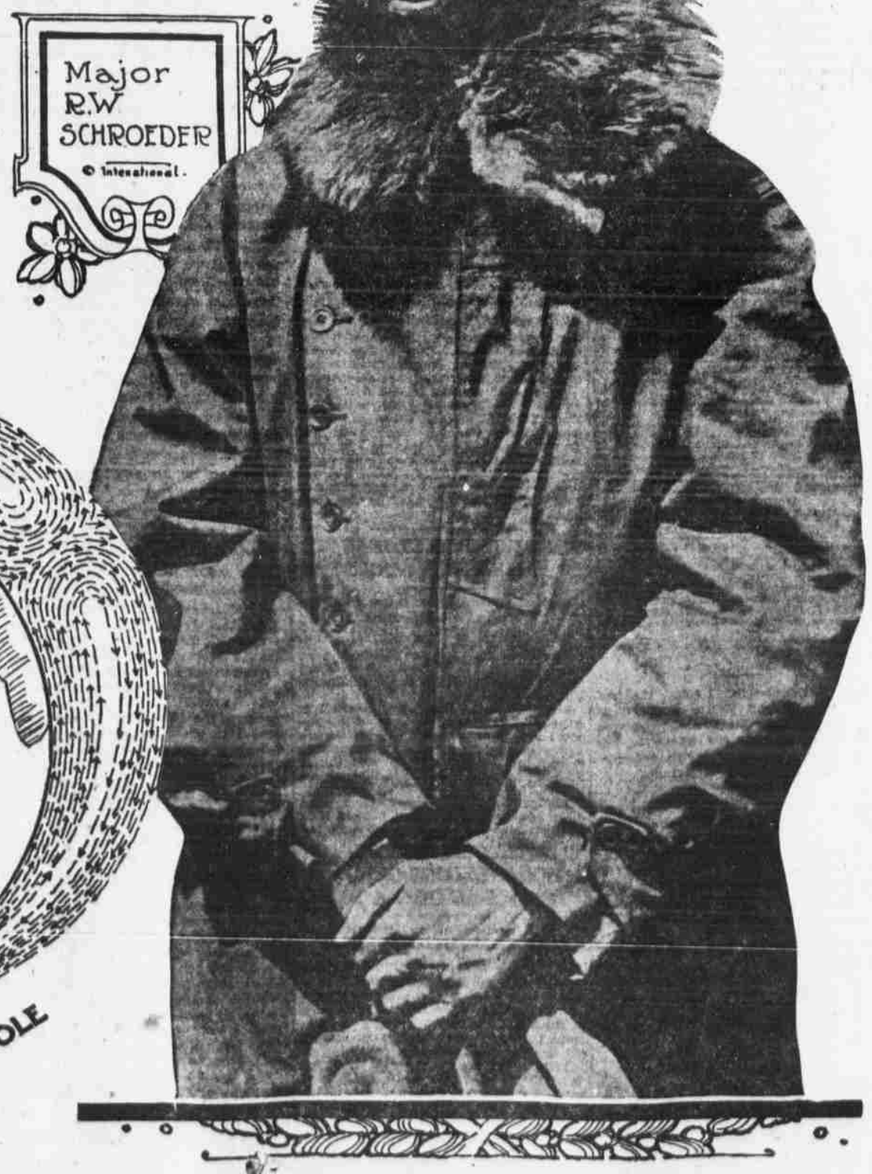
"There is another motion in that air which is very mysterious and has a great deal to do with altitude flying. At the equator there are thousands of square miles of very dry, heated air. This expands and goes to great altitudes, where it overflows toward both poles. Reaching the poles it descends back to earth and returns to the equator, but as it travels toward the poles it naturally still is rotating with the earth, perhaps not quite as fast as 1,047 miles an hour, but faster than any one has been able to gauge, and a great deal faster than the earth's surface, due to the reduced diameter.

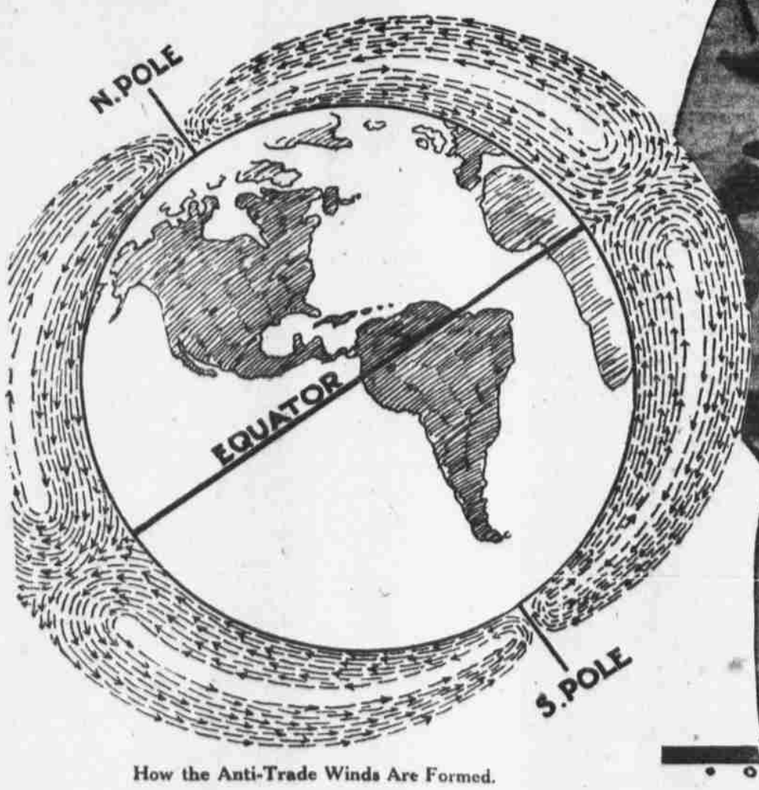
"It is above 25,000 feet that these enormous anti-trade winds are reached. A plane fighting them at an ordinary speed of 100 miles an hour will be carried backward at a rate twice that of its speed forward. For instance, the first time I encountered them at an altitude of around 30,000 feet was at McCook Field in Dayton, O., during the war. For an hour and a half while on an altitude flight I flew a dead westerly course, expecting to land about 150 miles west of Dayton. I came down to find that I was 200 miles east of that place. The enormous wind had carried me 350 miles from where I expected to descend. You see what would happen if you ascended high enough, flew with the wind and started around the world.

It was in February, 1920, that the major soared to his record distance. **It was then that fortune smiled upon him and left him alive to tell the tale** of an experience never before nor since encountered by man. With his eyeballs frozen from the fierce cold at the 38,180 foot level to which he climbed, and while senseless in his machine from the lack of oxygen and the inhaling of large quantities of carbon monoxide gas (similar to that which you get when you let your motor car run in the garage with the door shut), he tumbled like a rock for thirty-six



Major Schroeder's Airplane Climbing Above McCook Field in Record Flight on Which He Encountered Anti-Trade Wind.





How the Anti-Trade Winds Are Formed.

Major Schroeder, Who Encountered This Wind on 38,180 Ft. Record Altitude Flight and Fell 7 Miles, Tells How to Harness It.

thousand feet—nearly seven miles—before regaining semi-consciousness. Still virtually blinded, he managed to right the rampaging machine and glide to McCook field, where, within ten feet of the ground, he again lapsed into unconsciousness, but managed to land safely.

For this trip he wore an electrically heated uniform and gloves and special anti-freeze goggles, and carried two oxygen outfits, one of an automatic nature and the other a large bottle with a rubber hose attached.

"At about thirty-four thousand feet I encountered one of the wind-whipped snowstorms which infest that region," says the Major. "At the edge of this I ran into the lowest temperature—67 below zero Fahrenheit. Just above this snowstorm I encountered a little rough air, but I went out into smooth air and got a 2-degree rise on the thermometer—and that was the first time a human being had ever got into the stratosphere. It meant that I was in the tropical airs flowing to the North Pole. All of the time I was drifting rapidly to the east, despite the fact that I was headed west.

"When I got close to thirty-six thousand feet the cockpit began filling with a gray steam. I let the machine go on up, but the oil-like smoke bothered me very much. I didn't know it then, but it was the carbon monoxide gas. It seemed to daze me at times. All the while I was 'smoking' on my bottle of oxygen. The only way I could keep consciousness was to smoke away for dear life on that tube. The gray steam began depositing moisture on the wings and wires, which froze until there was a coat of ice an inch thick over the centre part of the ship.

"The only way I could get fresh air was to lean far over the left side of the machine and smoke away on the oxygen until I became so exhilarated I had to quit. I figured out that if I kept climbing and drifting at the rate I was going I would come down in New York or Pennsylvania with the hour and a half of fuel I had left, but my supply of oxygen was dwindling. I made up my mind that if my supply in the 'pipe' ran out I would dive to 20,000 feet. I also realized that I would be sitting pretty if I could connect the rubber tube to the supply of oxygen in the automatic regulator, as then I would be good for another hour. There was a brass tube running to the regulator and I decided to break that and attach the rubber.

"I tried to look down, but I couldn't see the tubing. I didn't dare take off my gloves to feel for it, because my hand probably would have frozen instantly. I felt around for the tubing with my heavy glove on. In the meantime the oxygen was getting so weak that I knew I had to hurry. I realized the only thing to do was to pull down the goggles and take a peek to see where the tube was, break it off quickly and place the rubber hose on it.

"Naturally I acted as speedily as I could. I reached for my goggles, pulled them off—and my eyeballs froze almost instantly. It felt like hot water had been dashed into them. I couldn't realize, of course, what had happened so quickly. I reached up quickly to feel of my eyes to find out why I had suddenly gone blind and as I did so I knocked the oxygen tube out of my mouth and it fell to the floor.

"Then I was in for it. Thirty-eight thousand and some feet up, eyes frozen, no oxygen and nothing to inhale but deadly gas! I knew that I had to do one thing. That was to get down in a hurry by diving. I did. I pushed the ship into a dive and reached for the switches to shut off the engine. As I did so my hand dropped to my side and I fell forward. I was just barely able to realize something had happened—I couldn't exactly figure out just what then. I didn't know how far I fell or how fast or how long I was unconscious, but I suddenly remember instinctively reaching for the controls and straighting out the machine. It was some minutes before I realized I was in the air, and then I was still very hazy. I knew my eyes were wide open, but I could see nothing. I took off my gloves, held my warm hands over them and worked the lids down gradually. In perhaps fifteen or twenty seconds I was able to see a bit of daylight. But my eyes wouldn't stay focused. There would be flashes of light and then darkness. I kept them closed to rest them, taking a peek every minute or so.

"By these peeks I discovered that I was lost. Finally, however, after perhaps twenty minutes or a half hour I recognized familiar ground below me and headed for McCook field, which was perhaps fifty miles away. I kept my eyes closed a greater part of that distance for the last long effort of putting the machine on the ground. I knew that if my eyes didn't improve I would have to get off in a parachute and let the machine go. I finally opened my eyes and discovered I was just above McCook field. I sent the ship into a spiral as hard as she would go. I kept my eyes shut until I was about three hundred feet from the ground. I then straightened out and was about ten feet from the ground before everything went black again. My eyes failed. I brought the controls back gradually and as the wheels touched the ground I collapsed, probably due to the strain I was under. The boys at the field pulled me out and it was several weeks before I fully recovered. In addition to my eyes, the physicians said my heart had expanded under the high altitude to more than twice its natural size.

"The instruments gave a record of the flight, part of which I could not remember. The time consumed in the 36,000-foot fall was two minutes and eleven seconds and the greatest speed attained in the drop was 375 miles per hour—between 30,000 and 20,000 feet. The power, you know, was on all the way down. Two gasoline tanks, I learned later, had collapsed under the external pressure."

And that's the faller's story of the world's greatest fall. However, it may not be his last because he is not yet through venturing far into the domain of the birds. Some day he wants to take that 8-hour jump from San Francisco to New York. He won't be satisfied until he does it.

"I had planned a non-stop flight in a supercharged machine with two engines from San Francisco to New York, flying with the anti-trade winds," he said. "The machine was to be supercharged with air-tight cabin and this was to be supercharged also, as were the engines. With this sort of a cabin and engines it would not be necessary to take heavy flying equipment or oxygen apparatus. At about 30,000 or 35,000 feet one ought to make about 300 miles an hour in the wind, requiring about eight hours in the air. Some day, when we become more familiar with supercharged engines, I intend to make the trip."